

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

What is claimed is:

1-8. (Cancelled)

9. An isolated nucleic acid molecule encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, wherein said altered G protein or polypeptide retains immunogenicity and, when said altered G protein or polypeptide is incorporated into an immunogenic composition and administered to a vertebrate, does not induce enhanced disease upon subsequent infection of the vertebrate with RSV.

10. (Cancelled)

11. (Cancelled)

12. The isolated nucleic acid molecule according to Claim 9, wherein the alteration is in the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19.

13. The nucleic acid construct comprising an isolated nucleic acid molecule according to Claim 9 operably linked to a regulatory sequence.

14. A chimeric nucleic acid construct comprising:

a) an isolated nucleic acid molecule encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, wherein said altered G protein or polypeptide retains immunogenicity and, when said altered G protein or polypeptide is incorporated into an immunogenic composition and administered to a vertebrate, does not induce enhanced disease upon subsequent infection of the vertebrate with RSV;

b) an isolated nucleic acid molecule encoding all or an immunogenic portion of F protein of RSV; and

c) a regulatory sequence operably linked to both (a) and (b).

15. A recombinant host cell comprising a nucleic acid construct according to Claim 13.

16. A recombinant host cell comprising a nucleic acid construct according to Claim 14.

17. A method of producing an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, which retains immunogenicity and which, when incorporated into an immunogenic composition and administered to a vertebrate, does not induce enhanced disease upon subsequent infection of the vertebrate with RSV, comprising maintaining a recombinant host cell according to Claim 15 under conditions suitable for expression of the altered G protein or polypeptide.

18. A method of producing a chimeric polypeptide comprising an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, which retains immunogenicity and which, when incorporated into an immunogenic composition and administered to a vertebrate, does not induce enhanced disease upon subsequent infection of the vertebrate with RSV, and all or an immunogenic portion of F protein of RSV, comprising maintaining a recombinant host cell according to Claim 16 under conditions suitable for expression of the encoded chimeric protein.

19-40. (Cancelled)

41. An immunogenic composition comprising a physiologically acceptable vehicle and an effective amount of an isolated nucleic acid molecule encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184

to amino acid 198 as set out in SEQ ID NO: 19, where said altered G protein or polypeptide retains immunogenicity and, when said altered G protein or polypeptide is incorporated into an immunogenic composition and administered to a vertebrate, provides protection without inducing enhanced disease upon subsequent infection of the vertebrate with RSV.

42. The immunogenic composition according to Claim 41, further comprising a transfection-facilitating agent.

43. A method of inducing an immune response in a vertebrate, comprising administering to said vertebrate an effective amount of an isolated nucleic acid molecule encoding an altered RSV G protein or polypeptide effective to induce an immune response, and a transfection-facilitating agent, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, where said altered G protein or polypeptide retains immunogenicity and, when said altered G protein or polypeptide is incorporated into an immunogenic composition and administered to a vertebrate, provides protection without inducing enhanced disease upon subsequent infection of the vertebrate with RSV.

44-50. (Cancelled)

51. An immunogenic composition comprising a physiologically acceptable vehicle and an immunologically effective amount of a live attenuated pathogen which has inserted within it as a heterologous nucleic acid segment a nucleic acid sequence encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, such that upon administration to the vertebrate, the altered G protein or polypeptide is expressed and is immunogenic, but does not induce enhanced disease upon subsequent infection of the vertebrate with RSV.

52. The immunogenic composition according to Claim 51, wherein the live attenuated pathogen is an attenuated bacterium.

53. The immunogenic composition according to Claim 52, wherein the live attenuated bacterium is Salmonella.

54. The immunogenic composition according to Claim 51, wherein the live attenuated pathogen is an attenuated virus.

55. The immunogenic composition according to Claim 54, wherein the live attenuated virus is an attenuated Venezuelan Equine Encephalitis virus.

56. A method of immunizing a vertebrate against RSV, comprising administering to the vertebrate a composition comprising a physiologically acceptable vehicle and an immunologically effective amount of a live attenuated pathogen which has inserted within it as a heterologous nucleic acid segment a nucleic acid sequence encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, such that upon administration to the vertebrate, the altered G protein or polypeptide is expressed and is immunogenic, but does not induce enhanced disease upon subsequent infection of the vertebrate with RSV.

57. A method according to Claim 56, wherein the live attenuated pathogen is an attenuated bacterium.

58. A method according to Claim 57, wherein the live attenuated bacterium is Salmonella.

Preliminary Amendment - 10 -
Divisional of 09/526,195

59. A method according to Claim 56, wherein the live attenuated pathogen is an attenuated virus.

60. A method according to Claim 59, wherein the live attenuated virus is an attenuated Venezuelan Equine Encephalitis virus.

61-63. (Cancelled)